

## The StarLink™ Situation

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### Background

In mid September 2000, traces of the Aventis Bt corn event (marketed as StarLink™) were identified in taco shells manufactured by Kraft Foods and distributed through the fast food chain, Taco Bell. This occurrence represented a significant challenge to the existing grain production, handling, and processing sector since this biotech product was not approved for use in grain products for human consumption. Thus, a costly recall was required to remove the unapproved product from the marketplace. A second recall of taco shells found to contain traces of StarLink™ from Safeway food stores was announced on October 11, 2000.

Other corn processors and food manufacturers have become concerned about the presence of StarLink™ in raw products coming into their plants. In the October 16, 2000, *Wall Street Journal*, Gruma SA, a large Mexican corn miller, indicated that they would withdraw all yellow corn products from the market. Mission Foods, a large U.S. tortilla maker in the Southwest, is recalling all its taco shells, tortilla chips and other yellow corn products. Azteca, a joint venture company owned by Archer Daniels Midland and Gruma SA, would do likewise.

On October 16, ConAgra Foods, Inc. indicated that it had temporarily halted operations at its Atchinson, Kansas, mill because ConAgra feared this mill might have received the same type of genetically modified corn that sparked a nationwide recall of taco shells. A few days earlier, Safeway, Inc., Food Lion, Inc. and Shaw's Supermarkets, Inc. announced that they were pulling their private label taco shells from store shelves because the products were made by Mission Foods.

Also, on October 16, Archer-Daniels-Midland Co. and Cargill, Inc., said that their mills were using new testing kits to scan corn being bought from farmers. By October 18, several loads of corn and several rail cars of corn had been rejected at ADM facilities because of suspected presence of StarLink™ crop or StarLink™-contaminated crop.

The Kellogg Company shut down a plant over concerns about StarLink™ sometime late in the week ending on October 20. Also, on October 20, Tyson Foods was reported to have stopped feeding corn to chickens containing StarLink™ modified corn.

It is important to recognize that only the Aventis Bt event, not all Bt corn in general, is involved in this situation. The Aventis event has not received regulatory clearance for human consumption.

The roots of the problem lie in the period 1995-99. Many new biotech products were being commercialized by the developing companies. Approval by domestic and foreign

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regulatory bodies was the final hurdle necessary before commercialization and was aggressively sought. Huge financial investments in the development of these products and the need to begin showing returns to stockholders were creating a sense of urgency. Intense competition among firms in the biotech industry to establish an early position in this new market created a “gold rush” like atmosphere among those with products close to introduction. Biotech firms placed a high premium on gaining rapid regulatory approval for these new products.

## Registration

It was amidst this very competitive climate that EPA raised questions about StarLink’s suitability for human consumption, thereby delaying its registration. The questions surrounded the slower digestibility of one protein and lack of data on whether that protein is an allergen. Urgency to establish a competitive position led AgrEvo to seek and accept a limited and conditional registration for StarLink™ in order to get their product launched into the new marketplace. Under the limited registration granted by EPA, the product could be only used for animal feed but would need to be kept out of the human consumption food channels. It was further agreed that (a) growers would sign a contract stating that the product would not be sold into food or export channels and (b) growers would adopt certain identity preservation practices—including isolation to prevent cross-pollination with other hybrids.

Although these measures were certain to be cumbersome and expensive, AgrEvo accepted them as a condition for partial registration. With the partial registration in hand it began marketing efforts. The registration contained directions for use and warned of possible problems with the technology—

### “DIRECTIONS FOR USE

“It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Keep out of lakes, ponds or streams. Do not contaminate water by cleaning of equipment or disposal of wastes. All field corn containing the plant-pesticide that is sold or distributed by Aventis CropScience USA LP or a cooperator or licensee of Aventis, must be accompanied by informational material that contains the following:

“StarLink™ corn contains a *Bacillus thuringiensis* subsp. *tolworthi* insecticidal protein, Cry9C and may only be used according to the instructions below for the control of the following insects:

European corn borer	<i>Ostrinia nubilalis</i> (Huber)
Southwestern corn borer	<i>Diatraea grandiosella</i> (Dyar)

“StarLink™ corn contains a *Bacillus thuringiensis* subsp. *tolworthi* insecticidal protein, Cry9C and may only be used according to the instructions below for the suppression of the following insects:

Black cut worm	<i>Agroris ipsilon</i> (Hufnagel)
Common stalk borer	<i>Papaipema nebris</i> (Guen.)

“Do not use this corn until you have read the Bag Tag and the Grower’s Guide.

“**Insect Resistant Management:** To protect this important technology, a structured non-*Bt* corn refuge must be planted in close proximity to your StarLink™ corn fields. Specifically, a structured refuge of non-*Bt* corn equal to at least 20% of the total corn acres must be planted. The refuge must be located within ½ mile of the StarLink™ field, unless you plan to use a foliar-applied insecticide for Corn borer control; then it must be planted within ¼ mile. Any insecticide treatment for Corn borer cannot include sprayable *Bt* products.

**“Seed Production Uses:** Seeds expressing the Cry9C protein should be planted at a maximum of 40,000 seeds per acre on the site. Any seeds, plants or plant materials in the StarLink™ field, or within 660 feet of the field that is not used for seed production should be destroyed or used domestically for animal feed or non-food industrial purposes. None of the seeds, plants or plant materials in the StarLink™ field, or within 660 feet of the field, may be used for food uses or may enter international commerce.

**“Feed or Non-food Industrial Uses:** Seeds expressing the Cry9C protein should be planted at a maximum of 40,000 seeds per acre on the site. Any seeds, plants or plant materials in the StarLink™ field, or within 660 feet of the field, should be used domestically for animal feed or non-food industrial purposes. None of the seeds, plants or plant materials in the StarLink™ plot, or within 660 feet of the field, may be used for food uses or may enter international commerce.”

The registration also contained specific provisions for storage and disposal of the seed—

#### “STORAGE AND DISPOSAL

**“Seed Storage:** Store in a cool dry place separate from conventional corn seed.

**“Seed and Plant Disposal”** Any seeds, plants or plant materials in the StarLink™ field, or within 660 feet of the field, may be used domestically for animal feed or industrial purposes, or destroyed. None of the seeds, plants or plant materials in the StarLink™ field, or within 660 feet of the field, may be used for food uses or may enter international commerce.

**“Container Disposal:** Do not reuse bag. Discard bag in trash. Ensure that the bag is completely empty of seed before disposal.”

#### Information made available to producers

The tag attached to each bag of seed apparently contained the following statements—

#### “PRODUCT USE STATEMENT

“Prior to planting, read AgrEvo’s Grower’s Guide for StarLink, Bt insect protection. This guide provides detailed information on product use, integrated pest management, and resistance management. If you have not received a copy, or want more information, call AgrEvo USA at (612) 997-4500.

“This hybrid produces a *Bacillus Thuringiensis* Cry9C protein that provides significant protection against European corn borer (*Ostrinia nubilalis*). Routine insecticide applications should not be necessary under typical conditions to prevent yield loss caused by first- and second- generation infestations of this pest.

\* StarLink is a trademark of AgrEvo GmbH.”

#### “DESCRIPTION AND GUIDELINES

“Liberty Link: LIBERTY Resistant hybrids labeled with the LIBERTY LINK logo are virtually the same as non-LIBERTY LINK hybrids in all agronomic characteristics—except for one important difference. They are resistant to the herbicide glufosinate ammonium and are labeled for use with LIBERTY herbicides. LIBERTY LINK hybrids offer farmers greater herbicide selection by allowing direct applications of LIBERTY herbicide. Since LIBERTY herbicide provides broad spectrum weed control and a mode of action unlike any other herbicide, LIBERTY LINK corn will be an excellent choice for long term weed resistance management.

“Planting Recommendations: Clearly mark those fields which are planted to LIBERTY LINK hybrids to eliminate the possibility of herbicide application error. The application of LIBERTY herbicide to non-LIBERTY corn will result in crop injury and yield loss for which Garst cannot be held responsible. Management practices, other than expanded herbicide application options remain the same as those used with non-LIBERTY hybrid counterparts. If in the year following LIBERTY LINK corn, LIBERTY LINK soybeans are planted in the same field and should seeds from this LIBERTY LINK corn hybrid produce volunteer corn plants, it is important to note that these corn plants will not be controlled by an application of LIBERTY herbicide.  
\* LIBERTY and LIBERTY LINK are trademarks of AgrEvo GmbH.”

“IMIDAZOLINONE TOLERANT  
PRODUCT USE STATEMENT

“This hybrid contains a gene which makes it tolerant only to imidazolinone herbicides developed by American Cyanamid, such as Pursuit Plus\*, Resolve\*, Contour\* and Lightning\* herbicide. WARNING: The imidazolinone-tolerant gene will only safeguard this hybrid against applications of imidazolinone herbicides labeled for use on IMI-Corn. The imidazolinone-tolerant gene will NOT safeguard this hybrid against application of other herbicide chemistries labeled for use over-the-top of crops that have a different specified crop protection gene. Always read and follow herbicide label directions prior to use.

“ACCIDENTAL APPLICATION OF INCOMPATIBLE HERBICIDES TO THIS HYBRID  
COULD RESULT IN TOTAL CROP LOSS.

\*Pursuit Plus, Resolve, Contour, Lightning and IMI-Corn are trademarks of American Cyanamid Co.”

The reverse side of the seed order used by at least one of the selling firms contains the usual disclaimers of warranties, replanting commitment, return policy and provision for collection and dishonored checks. In addition, the provisions state—

“UNDER THIS PURCHASE AGREEMENT, CUSTOMER OR ANY USER MAY:

“Use this Hybrid Corn Seed, or any non-Hybrid Corn Seed found herein, for the purpose of producing grain for feeding **or processing**. (emphasis added)

UNDER THIS PURCHASE AGREEMENT, CUSTOMER OR ANY USER MAY NOT:

“Use any Hybrid Corn Seed, or non-Hybrid Corn Seed (parental line seed) which may be found herein, or any resultant plants therefrom, for any breeding, research, seed production, reverse engineering molecular or genetic analysis or any other purpose other than production of grain for feeding or processing.

“Sell, transfer, give or supply this Hybrid Corn Seed to any other person for any purpose.”

Apparently, a form had been prepared under date of April, 2000, entitled “StarLink™ Bt Grower Agreement” which contained restrictions on use of corn produced from StarLink™ seed. However, it appears that not all producers were asked to or did sign the agreement. The key provisions of the agreement state—

“In accepting StarLink™ corn, Grower agrees to direct the harvested grain and grain grown within 660 feet of the StarLink™ grain towards domestic feed (e.g. animal feed) and/or non-food industrial purposes. Grower agrees not to use this grain for food use or allow it to enter grain export channels. Grower further agrees to either feed the grain obtained from StarLink™ corn hybrids on-farm or sell it for domestic (animal) feed, industrial or non-food uses only. Possible domestic off-farm use of the grain includes selling it to feed mills, neighbors with livestock

operations or elevators that supply U.S. livestock feed operations. Aventis CropScience will provide Grower with a list of elevators or grain buyers that can provide this type of usage, prior to planting and/or prior to harvest.

“StarLink™ corn hybrids offer a new tool for insect resistance management since it contains a new and unique site of action. To protect this important technology, Grower agrees to plant a structured 20% non-Bt corn refuge either in or in close proximity to Grower’s StarLink™ corn field. The refuge must be established within ½ mile of the StarLink™ corn crop if insecticide use is not planned for the refuge acres and within ¼ mile of the StarLink™ corn crop in areas of the corn belt where conventional insecticides have historically been used to control ECB and SWCB, and StarLink™ growers want the option to treat for these pests in the refuge acres. Any insecticide treatment cannot include sprayable Bt products.

“I, the undersigned Grower, acknowledge that I have read and understand the terms and conditions of this Agreement and that I agree to them. I further understand that failure to comply with these terms and conditions will result in losing the opportunity to use this product in 2001.”

A brochure, apparently prepared by Aventis, denoted as the “2000 U.S. Edition” states—

“The Cry9C protein found in StarLink corn hybrids has undergone extensive laboratory and field testing for effect on the environment and its inhabitants. No adverse effects have been found on beneficial and nontarget organisms such as honeybees, earthworms, beetles and livestock.

“The use of StarLink hybrids and any corn grown within 660 feet of StarLink hybrids is currently limited to domestic animal feed, industrial non-food, or seed production uses.

“Grain from StarLink corn and any corn grown within 660 feet of StarLink hybrids cannot enter international trade until overseas approvals are granted. Grain can be processed as conventional grain for animal feed and industrial non-food uses in the United States.”

### Emergence of problems

The first hint of problems appeared in late 1998 and early 1999. Activist groups in Europe and concerns among larger segments of the general public in many EU countries were creating a demand for food products that did not contain genetically modified germ plasm of any type. Registrations in Europe for various biotech products were slowed and, in some cases, not granted. Archer Daniels Midland (ADM) announced in mid April, 1999, that it would not accept GMO products at some of its processing plants. Although the announcement was made prior to the 1999 planting season, some corn had already been planted and virtually all seed purchases had been made.

Some StarLink™ producers had already purchased seed and in a few cases it was planted prior to the announcement. Although producers were beginning to become aware of potential problems in marketing biotech products, there was not a widespread comprehension of just how strong the EU resistance to these products was and how it would develop going forward. The European response was characterized by many as a trade issue that was designed to keep U.S. products out of the EU. While this may have been the case initially, supermarket chains and food manufacturers were becoming less willing to sell products with biotech ingredients. These mixed signals to producers were difficult to interpret and there was not a great deal of time before crops had to be planted. In short, a large number of farmers planted those biotech products approved in the U.S. Some chose to plant StarLink™, which was approved in the U.S. only for non-food uses.

The issue was raised once again in August of 1999 when ADM requested that (where possible) non-biotech grain be segregated so that it would be possible to meet market demands for GMO-free food products in EU and other nations demanding them. At that time other processors announced that they would attempt to take biotech products that were approved in EU, but requested that non-EU approved products including StarLink™ be identified for non-food and non-export uses as livestock feed. While many producers did comply, the appearance of 1999 crop StarLink™ in the human food channel indicates that it had not occurred in all cases. The issue of cross-pollination may have been a major source of the problem.

The large carryover of 1999 crop corn along with the rapid movement of 1999 crop corn (held in farm storage under CCC loan) into elevators just prior to the 2000 harvest is also part of the problem. Elevator managers had no reason to believe that these deliveries of 1999 crop corn contained the EPA unapproved product. Many were unaware that any event had less than full domestic approval. This makes it likely that some corn containing StarLink™ has inadvertently entered elevators in those regions where it was grown in 1999. It is also possible that corn harvested adjacent to fields of StarLink™ corn could have been cross pollinated.

Where this corn is not owned by the producer who planted StarLink™, the neighboring producer would have no reliable way to know that cross pollination had occurred. Absent any knowledge that it should be segregated for use in feeding, the grain would be commingled with other grain on farm or placed in commercial storage. In either case it would eventually be delivered to the elevator by a neighbor who was unaware that he or she was delivering corn containing StarLink™.

At the beginning of the 2000 planting season, Aventis had not yet received EPA registration for all uses. It marketed StarLink™ once again under the limited registration for non food uses. There is, however, evidence that the contracts with growers were not properly executed in a significant number of cases. In other cases, growers may not have been given information on growing and handling limitations.

#### Actions taken by Aventis

Under date of September 29, 2000, growers received the following letter from Aventis CropScience, announcing an arrangement with the Commodity Credit Corporation to purchase "...all StarLink™ corn (including all buffer corn grown within 660 feet of the StarLink™ corn) which you do not intend to feed on the farm"—

"As you are aware from the StarLink™ Stewardship Program, StarLink™ corn is not approved for use in food for human consumption or for the export market. Concerns have been raised concerning the way in which StarLink™ corn is being sold.

"In order to ensure that this corn is properly sold, Aventis CropScience has reached an arrangement with the United States Department of Agriculture (USDA) to purchase directly from you all StarLink™ corn (including all buffer corn grown within 660 feet of the StarLink™ corn) which you do not intend to feed on farm.

"Under this offer, Commodity Credit Corporation (CCC) will pay a price equal to the October 2, 2000 CCC posted county price plus \$0.25 per bushel for all StarLink™ corn and buffer corn not fed on farm. CCC will be reimbursed by Aventis for this purchase. For any StarLink™ corn and buffer corn fed on you farm, Aventis will pay you a \$0.25/bushel premium. You must notify

Aventis by calling 888-283-6847 (888-Aventis) by midnight, October 6, 2000 of how you plan on disposing of your StarLink™ corn.

“The corn you sell to CCC will either: (1) be stored on your farm under CCC seal if storage is available at a pro-rated storage rate of \$0.25/bushel/month; or (2) delivered directly to a CCC-approved location in your area. CCC-approved delivery locations will most likely be feedlots or plants which use corn for industrial purposes. Aventis will be responsible for trucking charges for this delivery. After acceptance and payment of the purchase price or premium, confetti or some other identity agent will be added to the corn.

“This offer extends to all of your 2000 StarLink™ corn crop that is still growing in your field, or which is stored on your farm. It also extends to all 1999 StarLink™ corn crop which you may still have on your farm. This offer does not extend to corn that has already been removed from your farm.”

In early October, 2000, after personal contact with growers, Aventis mailed to those who were listed as purchasers of the StarLink™ seed the following notice—

“Seed Company records indicate that you have purchased StarLink™ corn seed which contains Cry9C Bt. As you are aware from the StarLink™ Stewardship Program, this corn is not approved for use in food for human consumption or for the export market.

“Please find attached a letter which describes an agreement between Aventis CropScience and the United States Department of Agriculture relating to StarLink™ corn. It is important that you carefully read this letter and respond to Aventis by phone as described in the letter.

“An Aventis CropScience representative or agent will be visiting you on your farm by October 8<sup>th</sup> to review the program set forth in the letter.

“We understand this is not what you expected when you purchased StarLink™ corn and we apologize for this inconvenience in the middle of harvest. We are committed to seeing that you are treated equitably and making this as simple a process as possible.”

Under date of October 13, 2000, Aventis CropScience further advised affected growers of options on disposal of the targeted corn with a deadline of October 20, 2000 for response. The letter read as follows—

“Recently, you received a letter from Aventis CropScience regarding the StarLink™ Enhanced Stewardship program. This program is being implemented to ensure StarLink™ corn will be used for the intended purposes and to provide an incentive to growers who participate in this program. As indicated in this letter, StarLink™ planted corn and all other corn grown within a buffer zone of 660 feet of a StarLink™ planted field should be used only for domestic animal feed or domestic non-food industrial purposes. You have received information about these requirements and the program both through the letter from Aventis and through a visit to your farm by an Aventis employee who gathered information about your production of StarLink™ corn.

“The StarLink™ Stewardship program has been further enhanced to provide additional flexibility in the handling and marketing of your StarLink™ corn. There are three program options to select from and the details of the options are outlined on the attached program documentation. Also, attached is the program option commitment form that is required to verify your participation. Please review the program options, complete the attached commitment form and return the form to Aventis by Friday, October 20, 2000.”

The letter contained an outline of the options available which stated as follows—

“Program Options:

- “1. Farmer can elect to participate in the SES Program and to feed all or part of his StarLink™ corn on-farm. For the StarLink™ corn fed on farm, the farmer will receive from Aventis a \$0.25 per bushel premium. Farmer does not receive any reimbursement for freight and/or storage.

“Program Requirements: An agent or representative of CCC/Aventis will make an on-farm visit and physically identify (placard) StarLink™ corn storage facilities and will estimate the total bushels in each storage facility. When grain from the facility is completely fed, farmer informs CCC/Aventis, and an agent or representative of CCC/Aventis makes on-farm visit to confirm facility is empty. Upon confirmation, farmer is paid \$0.25 per estimated bushel of StarLink™ corn fed. Deadline for all StarLink™ corn to be fed is May 1, 2001.

- “2. Farmer can elect to participate in the SES Program and to market all or part of his StarLink™ corn to a *StarLink™ Logistics Approved Destination*. For that portion of the StarLink™ corn so marketed, the farmer will receive from Aventis a \$0.25 per bushel premium. In the event additional transport distance is involved (i.e. beyond that farmer would have normally incurred) to deliver StarLink™ corn to a confirmed *StarLink™ Logistics Approved Destination*, farmer may be eligible for reimbursement of the additional freight expenses (see program requirements below). Farmer does not receive any reimbursement for storage.

“Program Requirements: In order to receive the \$0.25 per bushel premium, farmer must furnish StarLink™ Logistics with acceptable documentation regarding transport and delivery to approved destination. The premium will be paid on StarLink™ corn bushels actually delivered (as per scale tickets) and verified upon ‘cross-check’ with StarLink™ Logistics database to confirm that bushels delivered correspond to acres/bushels of StarLink™ corn grown/harvested by farmer (includes buffer, if applicable). Deadline for grain to be marketed is May 1, 2001. In order to receive reimbursement for any additional freight expense that may have been incurred, prior approval of delivery site by StarLink™ Logistics is required. For information concerning the approval process call StarLink™ Logistics at 1-866-785-8665.

- “3. Farmer can elect to participate in the SES Program and to sell all or part of his StarLink™ corn to CCC. For StarLink™ corn sold to CCC, farmer will receive the October 2, 2000 Posted County Price (PCP) in the county in which the grain was produced, plus the \$0.25 per bushel premium. CCC/Aventis (or agent) will arrange and pay for proper disposal of corn from origin (field and/or storage facility). If requested by CCC and agreed to by the farmer, farmer may use on-farm storage for StarLink™ corn, in which case farmer will be reimbursed for storage.

“Program Requirements: Farmer will enter into a Purchase Contract with CCC. Farmer will receive ‘advance’ payment from CCC (90% of Oct. 2 PCP for bin storage or 70% of Oct. 2 PCP for ground storage.) CCC/Aventis agent will make on-farm visit to physically identify (placard) StarLink™ storage facilities (in case of on-farm storage on behalf of CCC) and to estimate bushels. After movement of grain, a final settlement (reconciliation) will be done by a CCC/Aventis agent taking into account the following: actual delivered weight/bushels, the \$0.25 per bushel premium due, storage payments (if applicable), corn check-off, destination discounts from #2 yellow corn, etc., and after reconciliation is completed farmer will receive from Aventis the final settlement balance due to him.

- “4. Farmer can elect not to participate in the SES Program and to market his StarLink™ corn to a *USDA Approved Destination* without assistance from Aventis/ StarLink™ Logistics. Farmer does not receive the \$0.25 per bushel premium or any reimbursement for freight and/or storage.

“Note: Aventis will send a letter to those farmers who elect not to participate in the SES Program (i) confirming that the farmer has elected not to participate, (ii) informing the farmer that he will not receive any premium/freight/storage from Aventis, (iii) reminding the farmer of his obligation to deliver StarLink™ corn to a *USDA Approved Destination*, (iv) advising

farmer that, as part of its voluntary agreement with federal regulators, Aventis will provide the federal agencies with information concerning grower participation in the SES program.”

The letter also contained a “Program Commitment Form” for a producer to complete and return—

- “1.  Option 1. Farmer can elect to participate in the SES Program and to feed all or part of his StarLink™ corn on-farm. For the StarLink™ corn fed on farm, the farmer will receive from Aventis a \$0.25 per bushel premium. Farmer does not receive any reimbursement for freight and/or storage.

Approximate number of bushels: \_\_\_\_\_

- “2.  Option 2. Farmer can elect to participate in the SES Program and to market all or part of his StarLink™ corn to a *StarLink™ Logistics Approved Destination*. For that portion of the StarLink™ corn so marketed, the farmer will receive from Aventis a \$0.25 per bushel premium. In the event additional transport distance is involved (i.e. beyond that farmer would have normally incurred) to deliver StarLink™ corn to a confirmed *StarLink™ Logistics Approved Destination*, farmer may be eligible for reimbursement of the additional freight expenses. Farmer does not receive any reimbursement for storage.

Approximate number of bushels: \_\_\_\_\_

- “3.  Option 3. Farmer can elect to participate in the SES Program and to sell all or part of his StarLink™ corn to CCC. For that portion of the StarLink™ corn sold to CCC, farmer will receive the October 2, 2000 Posted County Price (PCP) in the county in which the grain was produced plus the \$0.25 per bushel premium. CCC/ACS (or agent) will arrange and pay for proper disposition of corn from origin (field and/or storage facility). If requested by CCC and agreed by farmer, farmer may temporarily store StarLink™ corn, in which case farmer will be reimbursed for storage.

Approximate number of bushels: \_\_\_\_\_

- “4.  I do not plan to participate in the Aventis Enhanced Stewardship Program and understand that I forfeit all benefits of the program.”

On October 18, an Aventis representative agreed to waive the October 20 deadline for a response.

### Cancellation of registration

On October 12, 2000, the EPA announced that Aventis was “canceling the registration of StarLink corn.” The full text of the announcement was as follows—

“At the strong urging of the Environmental Protection Agency, Aventis is announcing today that they are canceling the registration of StarLink corn. This means that StarLink corn can no longer be planted for any agricultural purpose. Today’s agreement will ensure that in the future no new StarLink corn will be grown and none will find its way into processed foods like taco shells.

“The voluntary agreement represents far and away the fastest tool available to EPA for quickly removing StarLink corn from being planted for any agricultural uses. This action will ensure the full protection of public health and continued consumer confidence in the food supply.

“EPA does not have any evidence that food containing StarLink corn will cause any allergic reaction in people, and the agency believes the risks, if any, are extremely low. However, because Aventis was responsible for ensuring that StarLink corn only be used in animal feed, and that

responsibility clearly was not met, today's action was necessary. The remaining StarLink corn must be used only for animal feed or industrial uses until existing stocks are depleted.

“EPA commends both Kraft Food and Safeway for the quick response they have taken to remove from sale taco shells suspected in containing StarLink corn.”

### Scope of the problem

Information on the Aventis website as late as October 2000, requested that growers who had not signed contracts sign and return them. However, at that late date there was little that could be done to change the isolation practices or prevent the inadvertent commingling of the StarLink™ grain with other grain on farm. In a few cases, Iowa elevator managers have reported that farmers have come forward to tell them that loads of StarLink™ corn have been inadvertently dumped in the elevator. The *New York Times* reported on October 14, 2000, that some in the grain trade estimate that 267 U.S. elevators may have had StarLink™ dumped and commingled into their inventories. The actual number could grow depending on how much contamination from inadvertent harvest time new crop deliveries, old crop 1999 deliveries and cross-pollinated grain was delivered in the August-October period.

The scope of the problem is related to (a) the number of acres of StarLink™ planted, (b) the geographic distribution of the acres planted, (c) the proximity of the StarLink™ acres to fields of other fully approved hybrids planted within a geographic area and (d) the adequacy of information provided to StarLink™ producers and farmers growing corn on adjacent land about the limitations on growing and marketing StarLink™. The number of acres and geographic distribution are known but the latter two are not as clear.

The National Corn Growers Association has listed 29 hybrids sold by 11 seed companies which had been approved for using the StarLink™ technology—

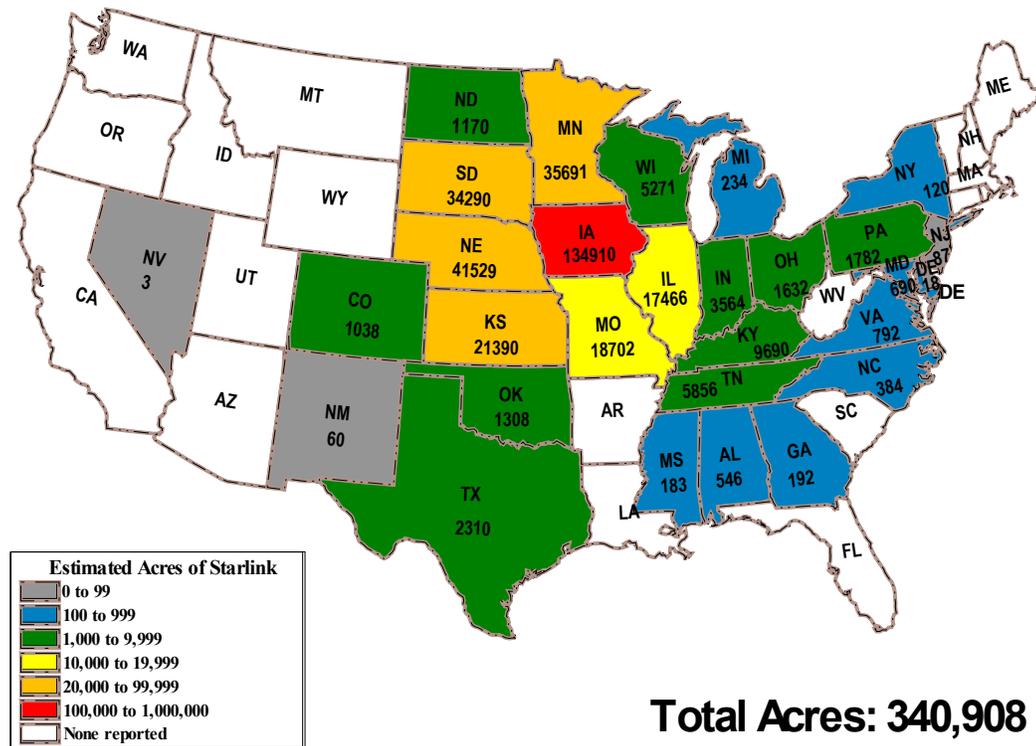
<i>Brand</i>	<i>Hybrid</i>	<i>Maturity</i>
AgriBioTech, Inc.	HT7707Bt	112
AgriPro Seeds, Inc.	8309GLS/Bt/LL	116
AgriPro Seeds, Inc.	9630Bt/LL	113
AgriPro Seeds, Inc.	8773BLT	99
Bo-Jac Seed Company	353SL	108
Cenex/Croplan Genetics	562Bt/LL	105
Cenex/Croplan Genetics	692Bt/LL	112
Cenex/Croplan Genetics	D5862Bt/LL	87
Curry Seed Co.	EX979	113
Curry Seed Co.	7891	113
Curry Seed Co.	EX869	109
Curry Seed Co.	EX944	106
Fred Gutwein & Sons Inc.	2529Bt/LL	110
Garst	8773BLT	99
Garst	8342GLS/LL	114
Garst	8366Bt/LL	113
Garst	8309Bt/LL	116
Garst	8896BLT	90
Garst	8692BLT	104
Garst	8600BLT	107
Garst	8585GLS/BLT	108
Garst	8481BLT	112
Garst	8539BLT	110
Hoegemeyer Hybrids, Inc.	6SL532Bt	111

Hoegemeyer Hybrids, Inc.	7SL 199Bt	114
Hoegemeyer Hybrids, Inc.	5SL 894Bt	108
Legend Seeds, Inc.	8905Bt	105
NC+ Hybrids	4709MBL	112
Sieben Hybrids	3710SL	111

The states involved are shown in Figure 1 along with the estimated number of acres of StarLink™ planted in the state.

The distribution of acres within the Midwest is shown in Figure 2 (see Appendix for larger maps). Iowa had the largest concentration of StarLink™ planted in the 2000 crop year with approximately 135,000 acres. Although the heaviest concentration of production is in the southwestern quadrant of the state, there are a few counties elsewhere in the state with significant acreages. Apparently, the marketing efforts were focused on parts of the state where there is heavy feeding demand. However, this is helpful only if corn produced from StarLink™ seed and the corn harvested from the pollen isolation buffer rows are segregated from non-StarLink™ inventories. There is reason to believe that this was not done in a significant number of fields.

## Figure 1. Estimated Acres of StarLink Corn



Source: <http://www.us.cropscience.aventis.com/AventisUS/CropScience/> (October 12, 2000).

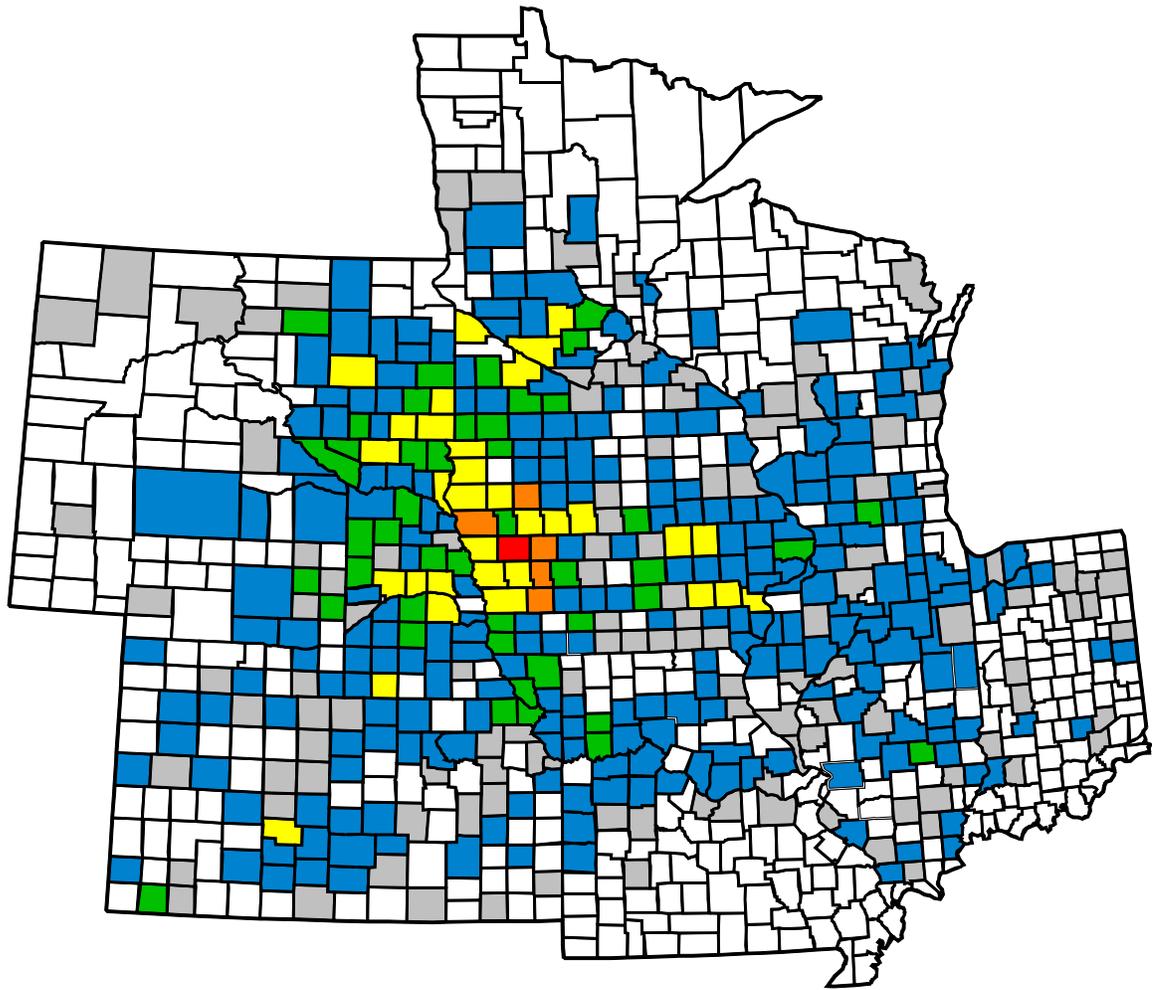
The operational burden of handling low level mixed lots falls primarily on the grain handling industry in the form of StarLink™ grain received at harvest, before the issue surfaced, and mixed in large storages. Overall, StarLink™ accounted for 0.5% of U.S. corn production, but 1.1% in Iowa and an estimated 9.1% in the highest production county (not including any pollination effects). Grain not yet delivered or already fed presumably is not creating future risk if producers adhere to one of the marketing programs. Cross-pollinated grain may be less easily identified and sequestered.

According to the EPA, any presence of StarLink™ in grain that is destined for human consumption is unacceptable.

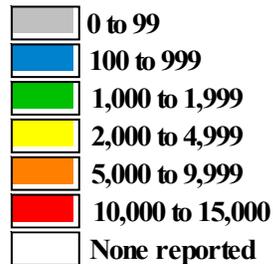
The elevators receiving grain directly from the farm (origination elevators) in areas where StarLink™ was grown will face numerous problems from the commingling that has already occurred. Even relatively small quantities of StarLink™ grain (or grain cross-pollinated with

## Figure 2. Estimated Acres of StarLink Corn

In Midwest states of South Dakota, Nebraska, Kansas, Minnesota, Iowa, Missouri, Wisconsin, Illinois, and Indiana; based on seed ordered



### Estimated Acres



Source: <http://www.us.cropscience.aventis.com/AventisUS/CropScience/> (October 12, 2000).

StarLink™ mixed with other hybrids can cause the lot to test positive. The ability of the elevator to ship grain to normal markets will hinge on the results of testing done by processors and exporters. Even those elevators where little of the StarLink™ corn was grown may have received some small quantity and face the risk of a positive test result.

Processors are testing inbound grain delivered to their facilities. These tests are immunoassay tests specific to the Cry9C proteins found only in StarLink™. The tests take about 10 minutes to perform (not including sample subdivision and grinding) and indicate the presence or absence of the StarLink™ specific protein. Presently, the detection limit reported by the manufacturer is 0.25% (1 kernel in 400). Testing at the processing plant in this manner adds extra expense and can leave loads that test positive out of position for their best use. For example, a train load originating in Western Iowa that tests positive at a Cedar Rapids processing plant will have moved from a heavy livestock production area into one where there may be less opportunity to move it into livestock channels. Beyond that, over time an excess of grain legally useable only for use as livestock feed can be expected to accumulate in the areas where processing plants operate.

The major problem in market channels will be sampling. An example will illustrate: If a corn lot contains 0.25% StarLink™ kernels, there will be about 2,275 kernels (7 of which will be StarLink™) in the typical 2 lb. elevator sample and about 13,000 kernels (33 StarLink™) in the typical 10 lb. official inspection sample. The natural tendency of grain graders is to divide large samples before doing any preparation such as grinding. It is certain in this process that some subdivisions will have more and some will have fewer GM kernels. The 400-kernel portions with more than 1 GM kernel will still test positive; the ones with less (0) will be negative.

- The elevator must take large samples and grind the entire sample before dividing.
- The lower the percentage of StarLink™ in the lot, the *higher* the risk of missing (false negative).

Elevators and buyers in low concentration areas may face greater risks and problems with conflicting tests than those in areas where levels are likely high enough to produce a positive result for nearly every possible subsample. Harvesting and handling operations have the potential to create inadvertent mixing in the 0.1-0.5% concentration levels, so equipment cleanout and careful inventory control will be more critical in this situation than in cases where tolerances apply.

The question has not arisen in previous non-GMO programs because generally testing was to confirm what was already managed to be GM-free grain rather than to identify randomly occurring low-level lots of uncontrolled grain. The latter situation is much more typical of mycotoxin outbreaks than specialty marketing programs.

Other problems for elevators include the contracts that they have written with processors and exporters who will no longer be able to accept commingled lots of corn. In order to fill these contracts it will be necessary for the elevator to locate and purchase inventories from other non commingled sources. Accomplishing this will almost certainly involve added costs for transportation and most likely price differences in what the StarLink™ can be purchased for and what it costs to purchase the non StarLink™ grain required to fill the contract.

Railroad contracts for hauling grain from an elevator are an additional potential problem area. Freight contracts require that a certain number of trainloads be delivered from the elevator and delivered to a processor or exporter destination. If there is no acceptable grain to ship from the contract origin elevators, the elevators may be in a position of having to “buy out” any trips remaining on the contract. Both of these contract related problems could easily add more costs than can be covered by the gross margins the elevator can earn.

### Ethanol as a potential use

On October 9, 2000, the Corn Refiners Association, Inc. (CRA) announced the following on using StarLink™ corn or StarLink™ contaminated corn for ethanol production—

“On September 29, the U.S. Department of Agriculture announced it would purchase StarLink corn from farm producers, with reimbursement of costs to be provided by Aventis CropSciences. According to the Department this measure was taken to ‘prevent the current crop of StarLink corn from being used in processed foods.’

“StarLink corn is fully approved in the U.S. for animal feed use and non-food industrial use. While neither USDA nor Aventis specified ethanol production in statements on acceptable markets, recent press reports have indicated that ethanol production may be an outlet for some of the purchased StarLink corn.

“Ethanol is produced by CRA members concurrent with, and in the same facilities as, food production. Because StarLink corn is not approved for use in food production, directing it to their facilities is a violation of the U.S. government registration for the product. CRA members provide corn gluten feed to domestic and export markets from only these facilities.

“Beyond this prohibition on food use of StarLink, this variety (and others not approved for European import) has appeared on a negative list of varieties from U.S. corn wet millers since its introduction in 1998.

“A limited number of corn dry-mills may be in a position to utilize StarLink corn for ethanol production. These mills do not produce food products and provide coproduct feeds only to domestic, and geographically limited, feed markets. The Department of Agriculture and private entities assisting in their purchase program have full information concerning the locations of these facilities.

“Irrespective of end-use, all outlets for purchased StarLink corn must be individually approved by the U.S. Department of Agriculture before delivery. On Friday, October 6, the Department told CRA and other grain processing and handling Associations it has not confirmed any ethanol facilities as approved destinations for StarLink corn.”

### Agreement reached with Aventis by Iowa Attorney General

On October 19, Iowa Attorney General Tom Miller announced that an agreement had been reached with Aventis CropScience on several pending issues. That agreement involved the following assurances from Aventis representatives—

- “Aventis’s top priority is to control and segregate StarLink™ corn. The company is seeking to keep the corn out of the grain marketing system, except for moving corn to ‘approved delivery sites’ that can accept the corn and keep it completely segregated from other grain. Aventis has a list of approved delivery sites in the U.S., including 51 in Iowa. Aventis agrees to provide farmers with names of approved delivery sites in their areas.
- “Aventis, with the USDA, has established the SES or StarLink™ Enhanced Stewardship Program under which farmers who grew the crop are encouraged to enter agreements for the

grain to be purchased at a premium of 25 cents per bushel over the October 2, 2000, posted county price. Under the SES program, producers are urged to store the corn on their farms until further notice. Aventis will pay costs for storage and shipping to approved sites.

- “Aventis said it will extend the October 20 deadline it formerly had set for farmers to decide to participate in the SES program. Aventis also agreed that farmers who participate in the SES Program are not waiving any rights to recover additional damages they may have incurred as a result of growing StarLink™ corn. ‘Farmers have more time, and they don’t have to give up any rights to participate in this program, Aventis told us today,’ Miller said.
- “Other corn commingled with StarLink™ corn and stored on the farm is not included in the SES Program. However, Aventis will pay storage and transportation costs associated with delivering the grain to an approved delivery location.
- “Growers who can verify to Aventis that they grew corn within 660 feet of StarLink™ corn (‘buffer growers’) will be eligible to participate in the SES program for grain grown in the buffer strip and still stored on their farm. The EPA license for StarLink™ specified that a 660-foot buffer strip was necessary at any StarLink™ field to prevent StarLink™ from spreading its genes to other varieties of corn during pollination. ‘We don’t believe most producers were aware of this requirement,’ Miller said.
- “Aventis will work with grain elevators that receive StarLink™ corn to assure that both StarLink™ and commingled StarLink™ corn are directed to appropriate approved delivery points. Aventis will pay for additional transportation, demurrage, and testing costs incurred by a grain elevator because of the commingled corn. Aventis said it will ‘work with’ grain elevators to address problems related to discounts in value for StarLink™ and commingled grain delivered to an approved delivery site.”

The announcement also indicated that unresolved issues remain—

“‘There are difficult issues still to be resolve,’ Miller said, ‘especially the likely discounted value of commingled grain and grain already in the distribution system. We have a long way to go to sort out all of those issues. Mr. Wichtrich [representing Aventis CropScience] said his company would continue working with us and those who are affected by StarLink™ corn problems. I told Mr. Wichtrich that it is unfair for farmers and elevators or others to be stuck with the consequences of problems they did not create.’

“Aventis also said it will provide test kits or testing at no charge to producers, elevators, or others. Aventis says the testing can determine if grain is StarLink™ corn or commingled with StarLink™ corn...”

### Further Aventis concessions

On October 20, 2000, in a letter to Keith Pitts of USDA, John Wichtrich, vice president of commercial operations for Aventis CropScience agreed to several more conditions relative to the StarLink™ matter:

- “1. The October 20, 2000, deadline set for farmers to decide to participate in the StarLink Enhanced Stewardship Program (SES) has been extended, as has the May 1, 2001 deadline for on-farm feeding within the SES Program. Discussion continues to establish new deadlines.
- “2. Farmers who participate in the SES Program are not waiving any rights to recover any additional damages they may have incurred as a result of growing StarLink corn.
- “3. Within the SES Program, Aventis will provide logistical support, including transportation costs, storage, demurrage, etc. for commingled corn stored on the farm that is subsequently

delivered to an approved location. However, the \$0.25 per bushel incentive or Logistics Service Fee will be payable only for the actual StarLink corn and buffer corn contained within the commingled lot. This is consistent with the agreement reached between Aventis and the USDA, FDA and EPA on September 29, 2000.

- “4. Growers who can verify to Aventis that they grew corn within 660 feet of StarLink corn (buffer growers) will be eligible to participate in the SES Program regarding the corn grown in the buffer strip as long as the above-referenced corn is contained and/or fed on-farm. Aventis will pay the storage and transportation costs associated with delivering the grain to an “approved delivery location.”
- “5. If grain elevators received StarLink corn, Aventis will work with them to assure that both StarLink and commingled StarLink corn are directed to appropriate approved delivery points. Aventis will pay for additional transportation, demurrage, and testing costs incurred by the grain elevator in directing the above-referenced grain to approved channels. Aventis will work with grain elevators to address problems related to discounts in value for StarLink and StarLink commingled grain delivered to an approved delivery site.
- “6. Aventis will make the sites on the “approved delivery site” list available on a case-by-case basis and as necessary to assist delivery of StarLink corn to those sites.
- “7. Aventis will provide test kits at no charge to growers and elevators who request them, in those cases where there is a demonstrated need for testing.”

The letter recites that the agreement was reached on October 18 as an amendment to the “StarLink [sic] Enhanced Stewardship Program.”

### Additional developments

On October 24, a group of farm and commodity organizations delivered a letter to USDA Secretary Dan Glickman urging immediate action on “defining the terms under which corn that may contain StarLink™ may be exported for approved uses”—

“Dear Mr. Secretary:

The regulatory issues surrounding the handling of StarLink corn have been disrupting grain markets for the last five weeks. During this period of time, the grain export industry has tried to be patient and work with government. But on repeated occasions, we have been promised action within 24 hours, only to find that official action has been delayed by some other event or consideration. We believe we are rapidly approaching a crisis point, and further delay will do irreparable harm to our marketplace.

A country that is a major importer of U.S. corn is expected to announce, and enforce, **within the next 36 hours**, an effective ban on the importation of U.S. corn—a zero tolerance for StarLink. It is logical to expect other U.S. customers to follow suit. Failure by the United States to act prior to that announcement invites disaster and loss of any control that we may have remaining to manage this issue.

The United States must get ahead of this anticipated action by defining the terms under which corn that may contain StarLink may be exported for approved uses. **We urge you to act by no later than close of business today, Tuesday, October 24.**

**Mr. Secretary, please consider the seriousness of this situation and urgency of this request. We need you to act now.**

Sincerely yours,

American Farm Bureau Federation  
National Corn Growers Association  
North American Export Grain Association  
National Grain and Feed Association

The Honorable John Podesta, Chief of Staff, White House  
The Honorable Ambassador Charlene Barshefsky, USTR  
The Honorable Carol Browner, EPA  
The Honorable Dr. Jane Henney, FDA”

The following day, October 25, the Consumers Union of Japan announced that it had found traces of StarLink™ corn in snack foods and animal feed sold in Japan. That country has not approved StarLink™ for import into Japan for either food or feed use.

The same day, October 25, Aventis submitted documents to EPA to obtain a temporary “tolerance” for StarLink™ in human food. Aventis said that it needed a four year approval period to clear any remaining StarLink™ from the food chain. Aventis also submitted data from a 30-day study of mice fed StarLink™. The study showed no allergic reactions, Aventis said. Aventis stated that StarLink™ was grown on 10,000 acres in 1998, 250,000 acres in 1999 and 350,000 acres in 2000.

On October 26, EPA representatives told a U.S. Senate panel that the agency was “unlikely” to ever again approve a biotechnology product such as StarLink™ for use as animal feed but not for human consumption. The limited registration by EPA was described as “...an unwise decision, although allowed by law.” The EPA representative stated, “we thought we had a sufficient stewardship program in place” but “the company didn’t live up to its side of the bargain.” Keith Pitts, USDA, added, “the USDA felt strongly that Aventis had not undertaken enough measures to keep this in proper channels.”

Late on October 26, USDA announced that it would allow the shipment of corn exports containing traces of StarLink™ corn under certain conditions.

On October 27, Japan’s Agriculture Ministry indicated that it had asked U.S. officials not to export corn containing StarLink™ to that country.

On October 30, the Environmental Protection Agency announced plans for a 30-day public comment period on the request that EPA exempt food products made from StarLink™ or StarLink™ contaminated corn from a tolerance required by the Food Quality Protection Act. The 30-day comment period ends November 27. On that date, EPA is scheduled to convene a meeting of independent, non-EPA scientists to review the issue.

In an electronic advisory to state and county offices on October 30, the Farm Service Agency of USDA advised FSA county offices that producers are allowed to forfeit StarLink™ corn to the Commodity Credit Corporation (CCC) at maturity. If they do so, the county office is to initiate a local sale of the crop, “restricting successful bidders to end users that will use the corn for animal feed or non-food industrial uses.” The advisory also stated—

“Producers with outstanding marketing-assistance loans ‘may need to obtain alternative financing’ to repay their loans before losing beneficial interest in the corn if there are delays in making payment by StarLink Logistics...”

The advisory states that producers of StarLink™ corn can lose beneficial interest on the date the producer (1) signs a confirmation of purchase contract with the Commodity Credit Corporation for on-farm stocks; (2) delivers and sells the corn to a StarLink™-approved destination (determined by the applicable terms and conditions of sale); or (3) feeds the corn on the farm.

Also on October 30, EPA announced that 14 people had complained to federal officials of adverse reactions from eating food products believed to be made from StarLink™ corn. By November 28, this number had expanded to 34, including three who have filed a class action suit in Chicago, Illinois.

On November 1, FDA announced that nearly 300 kinds of taco shells, tortillas, chips and tostados had been recalled from U.S. grocery stores and restaurants because of presence of StarLink™ germ plasm.

On November 3, the administrator of USDA's Foreign Agricultural Service was reported to have said that Japan had agreed to testing of corn destined for export to Japan for use as food.

On November 3, Aventis CropScience revised the safety assessment it had provided in the October 25 submission in its request for temporary food approval. The revised data reportedly indicate the possibility of a higher potential exposure to StarLink™ in food on the part of consumers than indicated by the original data.

The North American Millers Association (NAMA) has issued a statement outlining voluntary guidelines for testing for StarLink™ corn inbound to mills for processing. NAMA recommends that two subsamples of 400 kernels each be tested from each truck. For larger lots, the number of samples should be adjusted accordingly. Each subsample must test negative. The statement explains that if these procedures are followed, the grain miller will have 95 percent confidence that the level of StarLink™ present is 0.38 percent or less and 99 percent confidence that the level of StarLink™ present is 0.58 percent or less.

On November 15, Aventis SA announced that it had decided to divest its agriculture business, Aventis CropScience, and to focus on its more profitable pharmaceutical business. Aventis SA Acknowledged that Aventis CropScience has been operating as an independent legal entity since Aventis was formed in 1999. Aventis SA indicated that one option for Aventis CropScience was an initial public offering (IPO) under the name Agreva. Agreva is similar to the AgrEvo name used by the Hoechst-Schering AG joint venture which was rolled into Aventis.

In October, the Environmental Protection Agency completed its preliminary evaluation of the new data provided by Aventis CropScience in its application for temporary food approval for StarLink™ corn. EPA indicated that it "still questions whether or not Cry9C is or is not an allergen." EPA agreed that the potential dosage of Cry9C protein in typical diets is "extremely low", but indicated that the dosage levels for allergenicity, if any, were unknown. See [www.epa.gov/scipoly/sap](http://www.epa.gov/scipoly/sap).

On November 16, the Iowa Attorney General, Tom Miller, said that Iowa would consider legal action against Aventis CropScience if talks on compensation for losses over StarLink™ corn failed. Earlier, 16 state attorneys general had signed a letter to Aventis CropScience asking the company to take "further action to protect the interests of farmers, grain elevators and

consumers in responding to the revelations StarLink™ corn has gotten into the grain chain and food supply.” The full text of the letter is as follows—

“November 14, 2000

“John Wichtrich  
Vice President, Commercial Operations  
Aventis CropScience, USA LP  
2 T.W. Alexander Drive  
Research Park, NC 27709  
Via facsimile: 919/549-2500

“Dear Mr. Wichtrich:

“We, the Attorneys General of Iowa, Alabama, Connecticut, Illinois, Kentucky, Maryland, Michigan, Minnesota, Missouri, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota and Tennessee, write to convey our concerns regarding your company’s decision to market StarLink corn and the negative impact that decision continues to have on our states’ farmers, grain elevators, consumers, and others. We thank you for recognizing the very serious nature of this problem and cooperating with us to seek solutions.

“We have several objectives in dealing with this issue. First, we want to protect the food chain by ensuring that StarLink corn and StarLink corn commingled with other corn (commingled corn) is directed to approved uses. Second, we want to facilitate smoother operation of the grain handling system in order to reduce as many additional costs as possible. Finally, we intend to protect the economic interests of our farmers, elevators, and others in the grain industry who have suffered losses as a result of StarLink corn.

#### “Assurances Made to States

“We are encouraged by the October 18<sup>th</sup> assurances made by Aventis to Iowa Attorney General Tom Miller and the statements you made during the conference call with states on October 27<sup>th</sup> to extend those assurances to producers and elevators in all states.

“We think it is important to restate those assurances so there is no misunderstanding of Aventis’ responsibilities in all states:

- “1. The October 20, 2000, deadline set for farmers to decide to participate in the StarLink Enhanced Stewardship Program (SES) has been extended, as has the May 1, 2001, deadline for on-farm feeding with the SES program. Discussion continues to establish a new deadline.
- “2. Farmers who participate in the SES Program are not waiving any rights to recover any additional damages they may have incurred as a result of growing StarLink corn.
- “3. Within the SES Program, Aventis will provide logistical support (including payment of the costs of transportation, storage, demurrage, etc.) relating to commingled corn stored on the farm that is subsequently delivered to an approved location. However, the \$0.25 per bushel incentive or Logistics Service Fee will be payable only for actual StarLink corn and buffer corn contained within the commingled lot. The portion of the commingled corn stored on the farm which is not StarLink corn or buffer corn will not be included in the SES Program.

“In addition, if growers utilize StarLink Logistics, then Aventis agrees to ‘work with’ growers should any value discounts be assessed against their commingled grain. If growers do not utilize StarLink, then Aventis will ‘work with’ growers with respect to such value discounts on a case-by-case basis.

- “4. Growers who can verify to Aventis that they grew corn within 660 feet of StarLink corn (buffer growers) will be eligible to participate in the SES Program regarding the corn grown in the buffer strip as long as the above-referenced corn is contained and/or fed on-farm.

Aventis will pay the storage and transportation costs associated with delivering the buffer corn and corn commingled with buffer corn to an approved delivery location.

“In addition, if buffer growers utilize StarLink Logistics, then Aventis agrees to ‘work with’ buffer growers should any value discounts be assessed against their commingled grain. If buffer growers do not utilize StarLink Logistics, then Aventis will ‘work with’ buffer growers with respect to such value discounts on a case-by-case basis.

- “5. If grain elevators received StarLink corn, Aventis will work with them to assure that both StarLink and commingled corn are directed to appropriate approved delivery points. Aventis will pay for additional transportation, demurrage, and testing costs incurred by a grain elevator in directing the above-reference grain to an approved delivery point. Aventis will ‘work with’ grain elevators to address problems related to discounts in value for StarLink and commingled corn delivered to an approved delivery site.
- “6. Aventis will make the sites on the approved delivery site list available on a case-by-case basis and as necessary to assist delivery of StarLink corn and commingled corn to those locations.
- “7. Aventis will provide testing and test kits at no charge to growers and elevators who request them, in those cases where there is a demonstrated need for testing.

“We would request that you confirm these assurances in writing to each state which has signed this letter by November 17, 2000.

#### **“Further Steps Aventis Needs to Take**

“We appreciate Aventis’ cooperation in providing the assurances just discussed. However, we view this as a first step. We think Aventis must take additional action to effectively, quickly, and fairly meet its responsibilities for the consequences of marketing StarLink corn.

“1. Liquidity of Farmers and Grain Elevators. The grain handling system is a “just-in-time” inventory system that requires very rapid payments to all participants to maintain cost effectiveness and efficiency. Delays in payment can jeopardize the financial position of many in the grain handling industry. While Aventis has agreed to pay storage, transportation, and demurrage costs incurred by farmers, elevators, and buffer growers, we have reports in our states that claims made to Aventis are not being paid in an expeditious manner.

“There is a critical need for Aventis to establish a procedure whereby those incurring costs can receive quick compensation. As soon as possible, Aventis should establish a claims handling system to rapidly handle the paperwork associated with repaying these costs. Aventis should make clear exactly what documentation is required for payment. Undisputed claims should be paid within 30 days. This claims handling system should be made widely available, preferably on the Internet.

“Also, Aventis should make it clear that submission of claims and acceptance of payment by a person under this system is not a waiver of the right of that person to recover any additional damages incurred as a result of growing StarLink corn.

“2. Logistical Support Needed to Make Grain Handling System Work. Aventis has stated that its chief goal in this situation was to efficiently direct StarLink corn and commingled corn to sites where it could be used for approved feed and industrial uses. In this way, the food system can be protected and economic losses can be reduced. We share these goals.

“While we appreciate your explanation of StarLink Logistics on the October 27<sup>th</sup> conference call, we are concerned that Aventis has not dedicated adequate resources to prevent serious disruptions of the grain handling system. We would ask Aventis to markedly increase the logistical capabilities presently in place to address several problems we have experienced in some of our states. First, Aventis needs to identify more approved sites. Second, Aventis needs to hire additional staff to answer questions and to address bottlenecks, such as rejected rail cars. Third, Aventis should provide additional testing resources so that StarLink corn and commingled corn is

not shipped to unapproved sites. Finally, Aventis should improve its communication efforts about StarLink Logistics with interested parties through the Internet and other means.

“3. Loss in Value of StarLink Corn and Commingled Corn. It is inevitable that StarLink corn and commingled corn will suffer some loss in value (scope is yet undetermined). While Aventis has agreed to ‘work with’ producers, buffer growers, and grain elevators concerning this loss in value, we feel Aventis must make further, concrete steps to accept responsibility for these economic losses. We would welcome the opportunity to discuss this issue in the coming weeks.

#### “Summary

“It is impossible to state that these measure are themselves a definitive list of what Aventis will need to do to address its responsibilities associated with the decision to market StarLink corn. We have appreciated your willingness to cooperate with us on this difficult issue and we hope you will continue to cooperate with us on the matters raised in this letter.

“Sincerely,”

The letter was signed by the following Attorneys General:

Thomas J. Miller (Iowa), Bill Pryor (Alabama), Richard Blumenthal (Connecticut), Jim Ryan (Illinois), Albert B. Chandler III (Kentucky), J. Joseph Curran, Jr. (Maryland), Jennifer M. Granholm (Michigan), Mike Hatch (Minnesota), Jeremiah W. “Jay” Nixon (Missouri), Don Stenberg (Nebraska), Patricia A. Madrid (New Mexico), Heidi Heitkamp (North Dakota), Betty D. Montgomery (Ohio), W.A. Drew Edmondson (Oklahoma), Mark Barnett (South Dakota), and Paul G. Summers (Tennessee).

The U.S. Department of Agriculture on November 16 reported net export sales of 517,700 metric tons of corn for the week ending November 9 which represents a sharp reduction from October levels. Japan was reported to have acquired less than half its normal corn purchases.

On November 20, 2000, it was reported that two major grain processors by letter and in radio advertisements, had advised growers to avoid genetically modified varieties that have not been approved for export markets. Archer-Daniels-Midland, in radio advertisements stated that ADM mills will buy only crop, “that have full feed and food approval world-wide.” A.E. Staley Manufacturing Co., owned by Tate and Lyle PLC, in a letter to growers, stated “the only truly safe seed solution will be seed corn free of any genetic modification...our suggestions to you for seed corn selection in 2001 are non-GMO—yes; EU approved hybrids—plant with caution; hybrids not EU-approved—absolutely not.”

On November 29, 2000, Aventis CropScience said that it would suspend a December 1 deadline for premium payments to farmers with StarLink™ corn.

On December 1, six law firms filed a class action lawsuit against Aventis CropScience alleging that Aventis failed to act as outlined in the EPA registration for StarLink™. The lawsuit seeks class action status on behalf of all U.S. farmers who did not grow StarLink™ in 2000.

The Environmental Protection Agency (EPA) on December 5, 2000, announced that an independent panel of U.S. scientists had found that StarLink™ corn had a “medium likelihood” of causing allergic reactions. EPA, which appointed the panel, said that it would use the 28 page technical report to guide its decision on the request by Aventis CropScience to grant temporary approval of StarLink™ corn for food use.

This panel, meeting on November 28, received testimony and written evidence from over 40 groups, both pro and con on the biotechnology issue. According to the USDA, there are approximately 7,000,000 bushels (0.07%) of StarLink™ unaccounted for in U.S. grain supplies. Although this is a low concentration, the panel heard evidence that the Cry9C protein meets, at least in part, all six criteria for food protein allergenicity.

1. The protein is relatively resistant to acid treatment.
2. The protein is relatively resistant to protease.
3. The protein has molecular weight 10-70 D.
4. The native protein is probably glycosolated (combined with starch).
5. The protein induces an allergenic response in brown Norway rats.
6. The protein is found intact in rat bloodstream.

Of the 34 potential allergy cases reported in FDA, medical experts estimated 2-5 would eventually prove valid for corn in general with no way to assess the impact of Cry9C until more analysis was done. The full text of the November 28 report is available at [www.epa.gov/scipoly/sap/2000/November/one.pdf](http://www.epa.gov/scipoly/sap/2000/November/one.pdf). EPA must evaluate this report and other information as it decides on an appropriate response to the Aventis request.

Recent reports confirm that sporadic positive test results will continue through the marketing year. Sampling errors have been similar to those in mycotoxin years, with inconsistent retests and detections. On December 9, the New York Times reported that ADM in Cedar Rapids, Iowa, was rejecting approximately 4% of trucks arriving there.

In the EPA panel report, detection from mixing of seed and potentially from other hybrids expressing Cry9C was mentioned. Both of these add to the likelihood (for low levels) of positive detections at nearly any point in the market channel. The extent to which the Cry9C protein remains after food processing is still not known.

On December 19, 2000, it was announced that Aventis SA would take a charge of 100 million euros (\$90 million) in the fourth quarter “to cover costs relating to the recall of its StarLink™ strain of genetically engineered corn.”

Also on December 19, Pioneer Hi-Bred International, Inc. stated that it was postponing sales of six corn hybrids that combine two genetically modified traits not yet approved for export to Europe. This follows the action by Monsanto to restrict sales of EU-Unapproved hybrids (primarily Roundup Ready corn) to locations less likely to produce corn for export.

A panel, the U.S.-EU Biotechnology Consultative Forum, released a 19-page report on December 19 recommending that the United States and Europe should set content-based mandatory labeling requirements for foods containing “novel genetic material,” a term Europeans use for genetically engineered ingredients. The panel included representatives of consumers groups, academia and industry from the U.S. and the European Union.

Japan and Korea announced on December 19 that they had discovered StarLink™ corn in corn shipments to those countries. The Japanese Health Ministry found the corn in a cargo of U.S. corn destined for food use. Japan’s Kyodo News Agency reported that the StarLink™ corn was found in shipments that had tested negative in the United States. The Korea Food and Drug Administration detected StarLink™ corn in a shipment from the U.S.; the announcement

indicated that the 2,760 tons involved would be used for industrial or feed purposes. The suppliers were reported to be Cargill, Inc. and Agnex, Inc. However, these detections were expected by all parties. The monitoring protocol accepted on December 20 (see link on this site) was established to provide multiple assurances that the corn shipped from now on will not contain StarLink™.

On January 23, 2001, Iowa Attorney General Tom Miller announced that Aventis CropScience and 17 State Attorneys General had reached a formal agreement on compensation to growers and elevators for loss in value of crop and costs resulting from StarLink™ corn, buffer corn and commingled corn. A copy of the agreement is attached as Appendix A.

Under the terms of the agreement, Aventis CropScience has agreed to pay 25 cents per bushel to StarLink™ growers and growers of corn in buffer zones and to move the corn to approved sites. Growers and elevators are eligible for payments for documented costs or losses including transportation, storage, testing, demurrage and loss of value. The deadline for farmers to opt to participate in the program is February 15, 2001, and the grain must be marketed by September 15, 2001.

Non StarLink™ corn commingled with StarLink™ buffer corn or corn containing the StarLink™ protein, is eligible for a five cent per bushel payment if fed to livestock, 10 cents if marketed to an approved location.

States that have signed the agreement are Iowa, Alabama, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Minnesota, Mississippi, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota and Wisconsin.

The agreement does not release any claims or causes of actions that have been brought or that might be brought in the future.

On March 7, the United States Department of Agriculture announced that "less than 1%" of seed corn intended for planting in 2001 had tested positive for StarLink. USDA also indicated that it would spend up to \$20 million to purchase and destroy the contaminated seed. The March 8th *Wall Street Journal* reported that four seed companies had indicated that they would not participate in the USDA purchase program. The companies were Pioneer Hi-Bred International, Inc., Monsanto Co., Garst Seed Co. and Dow AgroSciences LLC.

Kellogg Co., on March 14, 2001, announced a recall of meat-free corn dogs after a sampling was shown to include StarLink germ plasm.

On June 13, 2001, the Centers for Disease Control and Prevention announced the results of a study into whether those who had complained of allergic reactions had experienced a reaction to the StarLink protein. The agency indicated that ". . . based upon the results of this study alone, we cannot conclude that a reported illness was a [StarLink] allergic reaction."

On July 5, 2001, it was announced that the U.S. Food and Drug Administration had found genetic material from StarLink corn in a white corn product. Until that announcement, it had been believed that StarLink would not be found in white corn.

On July 15, 2001, a supplemental agreement was announced between Aventis Crop Science and the Attorneys General from 17 states focusing on the plight of growers who have found Cry9c protein in their corn despite the fact that they had not purchased StarLink™ seed or grown corn within 660 feet of corn grown from StarLink™ seed. Aventis has agreed to a one-time extension of the September 1 deadline to feed StarLink™ corn to their livestock. Aventis agreed to pay 25 cents per bushel of corn containing Cry9c protein, 25 cents per bushel of buffer corn grown within 660 feet of non- StarLink™ corn containing Cry9c, five cents per bushel of commingled corn if fed on the farm or 10 cents per bushel if marketed to a StarLink™-approved destination. Growers can also be reimbursed for the excess cost of transportation, storage or other verifiable losses.

On July 27, 2001, the independent scientific advisory panel, which was convened on July 17-18 to evaluate new data on potential allergenicity from exposure to StarLink™ corn, concluded that there is a “medium likelihood” that StarLink™ protein is a potential human allergen. The Environmental Protection Agency said, based on the panel’s recommendations and the available scientific evidence, that approval of a tolerance level for StarLink™ corn in human food products is not currently supported. The panel endorsed EPA’s conclusion that the process of wet milling corn removes virtually all of the StarLink™ protein from products made for human food. This supports EPA’s finding that there is no public health risk from eating products manufactured from StarLink™ corn through the wet milling process if the corn used in the wet milling process does not contain significant levels of StarLink™.

On March 7, 2002, the United States District Court for the Northern District of Chicago approved a \$9 million settlement in a class action lawsuit filed on behalf of consumers who said they suffered allergic reactions from eating food products containing StarLink™ corn. Under the settlement, a group of food companies agreed to attach \$6 million in coupons, each good for a dollar off the purchase price, to packages of their products. The law firm filing the action will receive \$2.4 million in the settlement. An amount of \$600,000 is set aside to administer the coupon program.

On December 27, 2002, it was reported that traces of Starlink™ were found in 1200 metric tons of corn shipped to Japan (in a 19,234 ton shipment). Japan announced that it would increase the amount of sampling for Starlink™ in 2003. The shipment was from Harvest States, a division of CHS Cooperatives.

In mid-February, 2003, a proposed \$110,000,000 settlement was announced to the class action lawsuit which had been filed in the United States District Court for the Northern District of Illinois. A Fairness Hearing is scheduled for April 7, 2003, at 10:00 a.m. in the Dirksen Federal Building in Chicago. Eligible claimants have until March 21, 2003, to opt out of the settlement.

According to the SUMMARY STATEMENT NOTICE, posted at [www.non-starlinkfarmerssettlement.com](http://www.non-starlinkfarmerssettlement.com), “Corn Loss Proof of Claim” forms must be postmarked no later than May 31, 2003, and “Property Damage Proof of Claim” forms must be postmarked no later than July 31, 2003.

The website states--

“This Settlement covers farmers and other persons (individuals, partnerships and corporations) with a financial interest in non-StarLink corn harvested between 1998 and the present. You may be covered by the Settlement if one of the following describes you: (1) you operated a farm from which non-StarLink corn was harvested in 1998, 1999, 2000, 2001 or 2002, whether or not your corn stores suffered actual Cry9C contamination; or (2) you operated a farm from which non-StarLink corn was harvested at any time since 1998 and suffered actual Cry9C contamination of your crops or corn stores.”

The full text of the Summary Settlement Notice for StarLink corn class action lawsuit (<http://www.starlinkcorn.com/Claims/Documents/34800Starlink1232qxd.doc>) is as follows—

**SUMMARY SETTLEMENT NOTICE**

IN RE STARLINK CORN PRODUCTS LIABILITY LITIGATION	MDL Docket No. 1403
This Document Relates To: ALL NON-STARLINK FARMER ACTIONS	Judge James B. Moran

**IF YOU GREW OR HARVESTED NON-STARLINK CORN DURING ANY YEAR SINCE 1998, YOU SHOULD READ THIS NOTICE CAREFULLY. YOU MAY BE ENTITLED TO A RECOVERY FROM THE PROPOSED SETTLEMENT OF THE ABOVE LISTED LAWSUIT AND YOUR RIGHTS MAY BE AFFECTED.**

**This notice is only a summary of the Settlement. Call 1 (888) 833-4317, visit <http://www.non-starlinkfarmerssettlement.com> or write to the Claims Administrator to learn more about this Settlement.**

A settlement has been proposed in class action lawsuits brought on behalf of all persons and entities who operated farms in the United States from which corn grown for grain was harvested since 1998 (the "Settlement Class"). The suit seeks compensation for alleged losses to United States corn farmers who did not grow corn from StarLink™ seed. If you fit within the definition of the Settlement Class, you have various rights including, but not limited, to: (1) remaining in the Settlement Class and potentially receiving a recovery from the Settlement; or (2) requesting exclusion from the Settlement Class and pursuing individually whatever claims you believe you have.

The United States District Court for the Northern District of Illinois (located in Chicago) authorized this notice. The Court will hold a hearing on April 7, 2003, to decide whether the proposed Settlement should be approved and implemented.

**Who Is Included?**

This Settlement covers farmers and other persons (individuals, partnerships, and corporations) with a financial interest in non-StarLink corn harvested between 1998 and the present. You may be covered by the Settlement if one of the following describes you:

(1) you operated a farm from which non-StarLink corn was harvested in 1998, 1999, 2000, 2001 or 2002, whether or not your crops or corn stores suffered actual Cry9C contamination; or

(2) you operated a farm from which non-StarLink corn was harvested at any time since 1998 and suffered actual Cry9C contamination of your crops or corn stores.

The Settlement does not cover corn grown from StarLink™ corn seed under a license from an affiliate of StarLink Logistics, Inc., formerly known as Aventis CropScience USA Holding, Inc. ("SLLI"), and sold by Advanta USA, Inc., formerly known as Garst Seed Company ("Advanta"), or any other distributor of StarLink seed or corn seed containing Cry9C.

### **What Is StarLink?**

StarLink was a type of genetically modified, bio-engineered corn developed by SLLI. StarLink was genetically altered to contain an insecticidal protein, known as Cry9C, that enables it to resist various corn pests. StarLink corn seed was sold in the United States between May 1998 and October 2000.

### **What Is The Lawsuit About?**

The lawsuit alleged that SLLI and Advanta licensed, marketed or otherwise distributed StarLink corn seed in a manner that caused widespread contamination of U.S. corn supplies, diminishing the market value of corn. The lawsuit also alleged that SLLI and Advanta are responsible for StarLink contamination of the corn crops, fields, equipment and storage facilities of non-StarLink corn farmers.

SLLI and Advanta deny all allegations of wrongdoing and have asserted numerous defenses. The Court has not decided in favor of one side or the other. Instead, the parties agreed to a Settlement.

### **What Does The Settlement Provide?**

The Settlement provides for payment of \$110,000,000.00, plus accruing interest, which will be paid in cash, or through distribution of prepaid cards accepted anywhere Visa™ or MasterCard™ are accepted and redeemable for cash at their face amount at a financial institution subject to such institutions' normal charges for such transactions. If the Settlement is paid in prepaid cards, in addition to the prepaid cards being useable as, or redeemable for cash at their face value, a wide variety of goods and equipment generally used by the farming community will be made available at discounts off such products' regular retail, sale, and bulk purchase prices (the "Settlement Enhancement"). There is, however, no assurance at this time that the Settlement Enhancement will be accomplished. If the Settlement Enhancement is accomplished, a further publication notice over the Internet will be issued on or before March 12, 2003, and will be posted on the following websites: <http://www.non-starlinkfarmerssettlement.com> ; <http://www.cmht.com> ; <http://www.milberg.com> and <http://www.whafh.com> .

Before any distributions, to members of the Settlement Class, the proceeds of the Settlement will be used to pay plaintiffs' attorneys' fees and costs, the special awards to the named-plaintiffs, and the costs associated with notice to the Settlement Class and administration of the Settlement. All of the foregoing fees and expenses must be approved by the Court. ***No Settlement Class member will be asked or required to pay any fees or costs directly or otherwise suffer a net out-of-pocket loss as a result of participating in the Settlement.***

### **What Can You Get From The Settlement?**

Two types of compensation are offered to Non-StarLink farmers who file timely and properly completed Proofs of Claims:

(1) Property Damage: Eligible property damage claimants will be paid for lost market value, transportation, and storage costs resulting from actual contamination of your crops, fields, equipment and property, less any compensation such eligible property damage claimant received to date from Aventis CropScience USA, LP or SLLI. Total claims under this category are capped at \$10 million; if the total property damage claims exceed \$10 million, each claimant's compensation will be reduced proportionately.

(2) Corn Loss: All eligible non-StarLink corn farmers (including all property damage claimants) will receive a proportionate share of the balance of the proceeds of the Settlement as compensation for alleged reduction in the general price of corn due to the presence of StarLink corn in the United States corn supply based on the numbers of acres of corn that each eligible non-StarLink farmer harvested during the year 2000 (or 10% of the average acres in the years 1998 through 2002, if the Corn Loss claimant did not harvest corn in the year 2000) divided by the total acreage covered by all Corn Loss claimants.

In exchange for these benefits, Settlement Class members will release all claims against SLLI and Advanta relating to StarLink.

### **How Do You Participate In The Settlement?**

If you have **NOT RECEIVED** a Notice and Corn Loss Proof of Claim in the mail, **IMMEDIATELY** call the toll-free number, visit the website, or write to the Claims Administrator for a copy of the full Notice explaining all Settlement terms and the appropriate Proof of Claim form(s). Then, if you believe that you are a Settlement Class member, send in the appropriate Proof of Claim form(s), along with all documents specified in the accompanying instructions to the applicable Proof of Claim form(s), to claim your recovery. To obtain the necessary documentation, you should contact:

**Non-StarLink Farmer Litigation  
c/o The Garden City Group, Inc.  
Claims Administrator  
P.O. Box 9000 #6075  
Merrick, NY 11566-9000  
1 (888) 833-4317**

<http://www.non-starlinkfarmerssettlement.com>

- Corn Loss Proof of Claim forms must be postmarked **NO LATER THAN May 31, 2003.**
- Property Damage Proof of Claim forms must be postmarked **NO LATER THAN July 31, 2003.**

There is no charge for filing Proof of Claim forms, **but you must file in a timely manner Proof of Claim form(s) to receive benefits.**

### **Your Other Options**

If you are a Settlement Class member, you will be legally bound by this Settlement, whether or not you file a Proof of Claim form, **unless** you request exclusion from the Settlement Class. If you do not exclude yourself, you will not be able to sue SLLI or Advanta over StarLink. If you do not want to be legally bound by the Settlement, you must exclude yourself **NO LATER THAN March 21, 2003. If you exclude yourself from the Settlement, you WILL NOT receive any recovery from the Settlement.** If you stay in the Settlement Class, you have the right to object to the terms of the Settlement, the Plan of Allocation of the proceeds of the Settlement, plaintiffs' attorneys' request for attorneys' fees and/or expenses and/or the request for Special Awards for certain named-plaintiffs. You also have the right, if you remain in the Settlement Class, to appear personally and/or by counsel of your own choosing, but only at your own cost and expense. If you wish to exercise any of these rights, you must file the appropriate documentation **NO LATER THAN March 21, 2003.** The website and full Notice explain how to exclude yourself, submit objections or personally appear.

The Court will hold a hearing in this case, called ***In re StarLink Corn Products Liability Litigation, MDL No. 1403***, on April 7, 2003, at 10:00 a.m. (CST), in Courtroom 1843, at the United States Courthouse, United States District Court for the Northern District of Illinois, Everett McKinley Dirksen Federal Building, 219 South Dearborn Street, Chicago, IL 60604, to consider whether to approve the Settlement, the Plan of Allocation, the plaintiffs' attorneys' request for fees and expenses, and the plaintiffs' request for Special Awards. The date, time and location of this hearing may change; you may

check the date, time and location at <http://www.non-starlinkfarmerssettlement.com> [www.cmht.com](http://www.cmht.com); <http://www.milberg.com> or <http://www.whafh.com> . You may ask to appear at the hearing, but you do not have to appear personally to file your objections.

PLEASE DO NOT CONTACT THE JUDGE  
OR THE CLERK OF THE COURT FOR INFORMATION.

Below is an excerpt from a November 10, 2003 New York Times article.

*... a paper appearing today in the Journal of Allergy and Clinical Immunology reports that one vocal consumer who complained about allergic reactions turns out not to have been allergic to StarLink corn after all. The report casts further doubt on whether StarLink caused allergies, and it is likely to buttress contentions long made by biotechnology supporters that the dangers of StarLink were overblown. The journal article discusses the allergy testing of a 58-year-old man at Cincinnati Children's Hospital Medical Center who had complained of at least three allergic reactions to StarLink. The paper does not identify the man, and the authors declined to comment, citing medical confidentiality. But Keith A. Finger, a Florida optometrist, said in an interview that he was the subject and that he had asked to be tested.*

*Dr. Finger, along with two others, sued the developer of StarLink and some food companies, winning a settlement in which the companies pledged to provide \$6 million worth of food discount coupons. Dr. Finger said he received \$10,000 because of the suit. In the test, the subject was given StarLink corn, other corn and a placebo on different days, without him or the doctors knowing which was which. There was no sign of an allergic reaction on any day. The test is the "gold standard" of food allergy testing, said Dr. Marc E. Rothenberg, a professor and allergy expert at the medical center and an author of the report.*

*The new evidence, he said, "supports the view that there was no problem in terms of allergy," although he said it would be better to test more people.*

*StarLink, developed by Aventis CropScience, contained a bacterial gene to make the plant pest-resistant. It was withdrawn from the market, even for its previously approved use as animal feed. StarLink Logistics, a company Aventis set up to handle legal claims, had no comment Friday.*

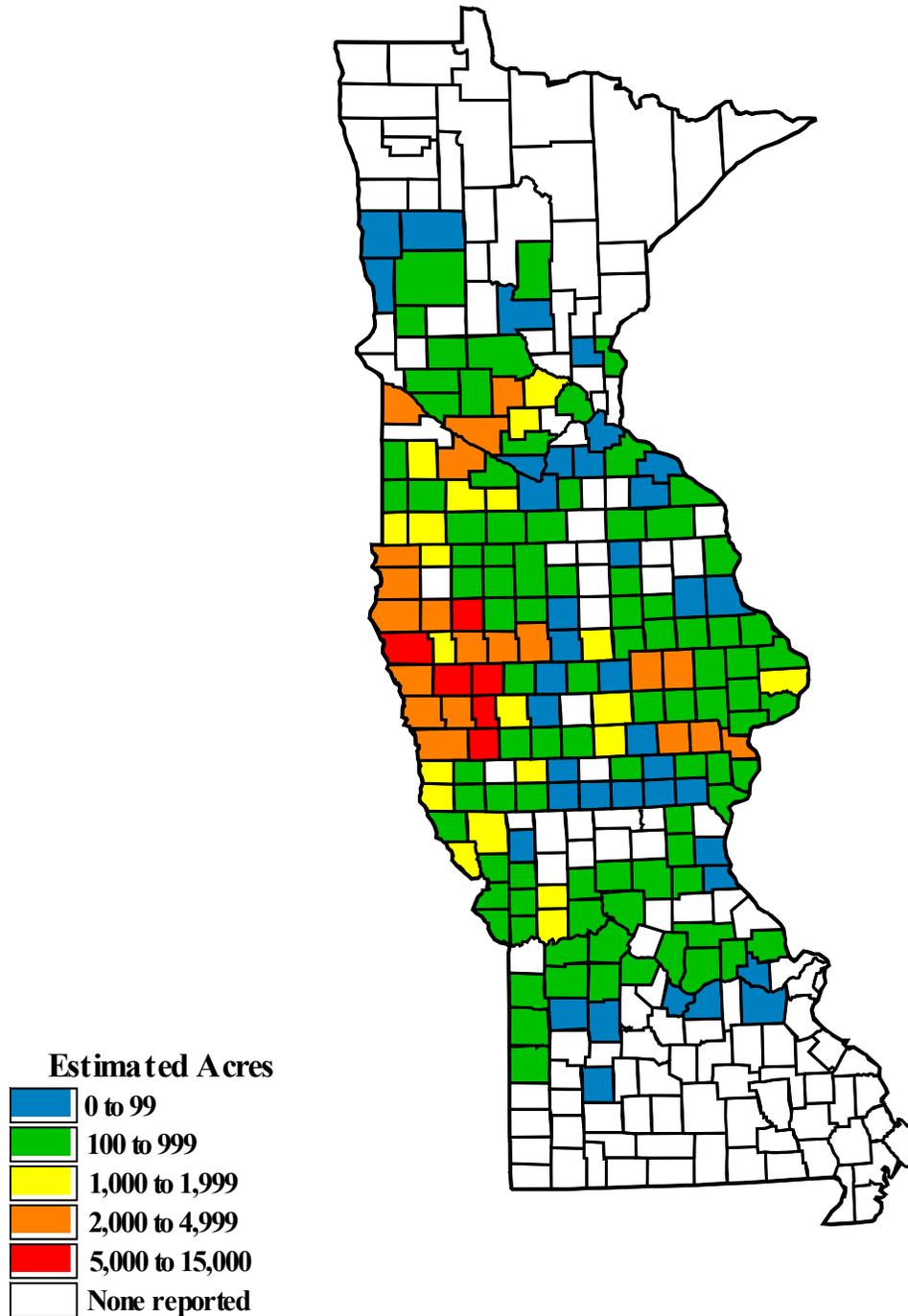
*But even the new results are not likely to lay the issue completely to rest. Scientists still cannot predict in many cases whether a genetically modified food will cause allergies. And Dr. Finger says he is still sure that he is allergic to StarLink.*

## Conclusions

An obvious conclusion from this saga is that approval of a crop variety for one use but not another is fraught with peril unless steps are taken to insure identity preservation. Such was not done in this instance. The consequence is substantial economic costs, most of which are borne at least initially by low-margin participants in the food chain—producers and elevators.

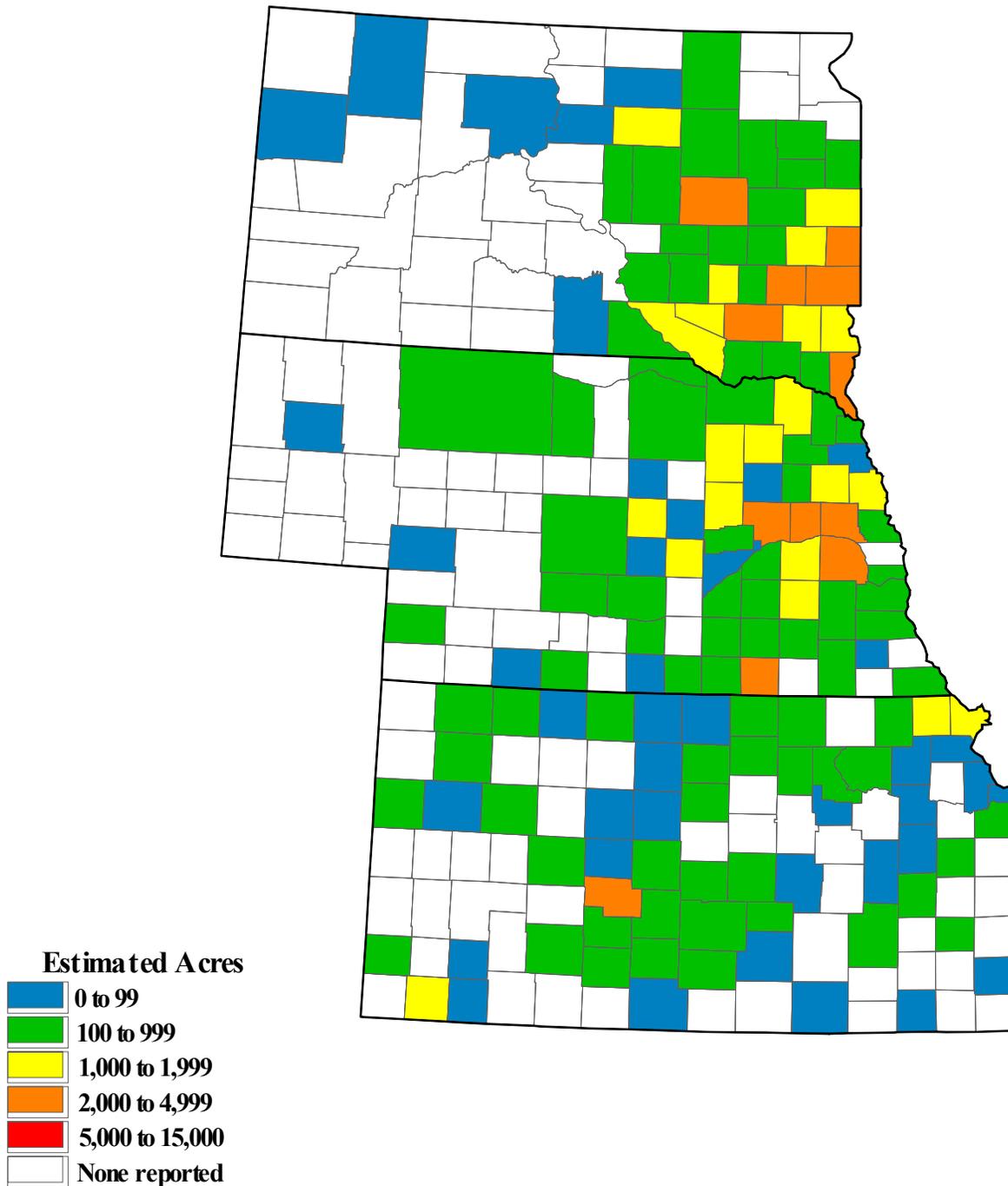
The major lesson which should be learned from this event is that regulators should, in general, not approve varieties for one use but not another unless the system is prepared to carry out the necessary segregation.

# Estimated Acres of StarLink Corn In Midwest States of Minnesota, Iowa and Missouri based on seed ordered



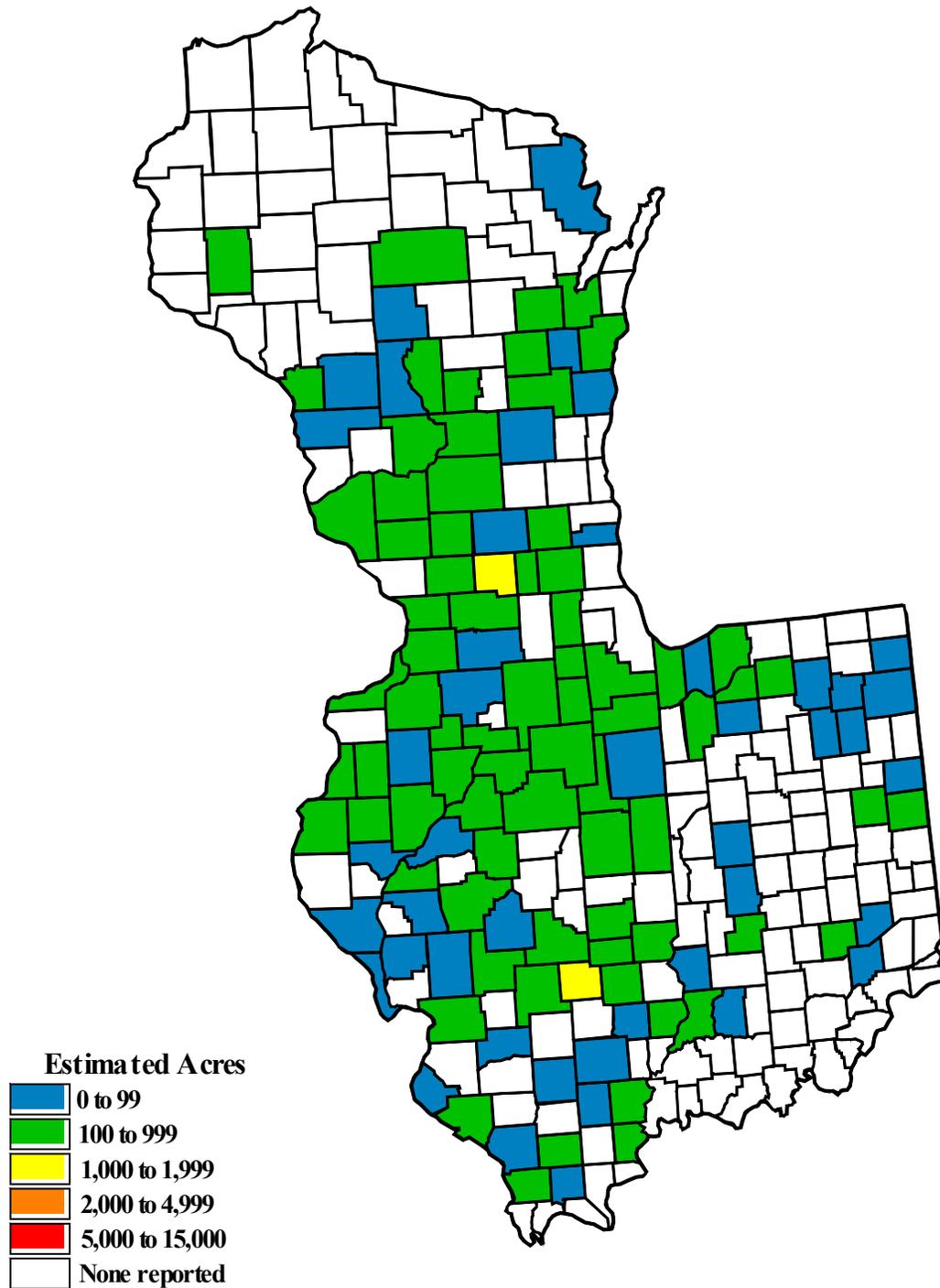
Source: <http://www.us.cropsscience.aventis.com/AventisUS/CropScience/> (October 12, 2000).

# Estimated Acres of StarLink Corn In Midwest States of South Dakota, Nebraska and Kansas based on seed ordered



Source: <http://www.us.cropscience.aventis.com/AventisUS/CropScience/> (October 12, 2000).

# Estimated Acres of StarLink Corn In Midwest States of Wisconsin, Illinois and Indiana based on seed ordered



Source: [Http://www.us.cropscience.aventis.com/AventisUS/CropScience/](http://www.us.cropscience.aventis.com/AventisUS/CropScience/) (October 12, 2000).

# AGREEMENT CONCERNING STARLINK CORN

between

**AVENTIS CROPSCIENCE USA LP**

and

**STATE ATTORNEYS GENERAL**

1. **PARTIES TO AGREEMENT.** The Parties to this agreements are the attorneys general of the states of Iowa, Alabama, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Minnesota, Mississippi, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota, and Wisconsin (hereinafter “the States”) and Aventis CropScience USA LP (hereinafter “Aventis”).

2. **PURPOSE OF AGREEMENT.** The States, on behalf of their respective states and on behalf of growers and grain elevators located in their respective states, and Aventis hereby enter into this binding contractual Agreement and hereby agree to the following measures in an effort to mitigate the economic losses suffered by growers and grain elevators located in their states resulting from Aventis’ decision to license Cry9C technology in the United States.

3. **CONSIDERATION.** The States and Aventis hereby expressly agree that adequate consideration has been offered and received by the Parties to this Agreement.

4. **MITIGATION MEASURES.** The mitigation measures covered by this Agreement are described in this section.

a. The following documents, which are attached as exhibits, are incorporated in this Agreement by this reference:

(1) “Aventis CropScience - StarLink Growers and Buffer Grower Claims Procedure For Losses Related to StarLink Corn.” See Exhibit A.

(2) “Aventis CropScience - Claims Procedure For Growers With Losses Related to Non-StarLink Corn Containing Cry9C.” See Exhibit B.

(3) “Aventis CropScience - Elevators Claims Procedure for Losses Related to StarLink Corn.” See Exhibit C.

b. Aventis agrees to amend the elevator claims payment procedure contained in Exhibit C to conform with the following:

(1) Payment. If an elevator presents a fully documented claim to Aventis under the claims payment procedure outlined in Exhibit C, then Aventis shall make payment within thirty (30) days of receipt of the claim. Any payment made after thirty (30) days shall be subject to a late payment fee of 1.5% per month compounded on a daily basis.

(2) Verification of Inventory. If Aventis chooses to verify the quantity of inventory held by an elevator and/or the StarLink status (i.e. presence of Cry9C protein or Cry9C DNA) of such inventory, then Aventis shall –

- (a) use measurement standards approved by the USDA,
- (b) use testing standards and sampling protocols approved the the USDA,
- (c) pay all costs, including loss of inventory value, associated with such verification, and
- (d) if (based on the results of Aventis’ sampling and testing) Aventis asserts that a given lot of corn does not contain StarLink (Cry9C protein or Cry9C DNA), then Aventis shall be responsible for any economic loss sustained by the elevator attributable to a subsequent detection of StarLink (Cry9C protein or Cry9C DNA) in that lot of corn.

(3) Excess Transportation. The term “excess transportation” shall mean incremental transportation costs incurred by an elevator as a result of the detection of StarLink (Cry9C protein or Cry9C DNA) in a lot of corn or as a result of the inability of an elevator to certify to a buyer that a lot of corn does not contain StarLink (Cry9C protein or Cry9C DNA). Excess transportation incurred by an elevator will be paid by Aventis at the higher of the actual costs incurred by the elevator or a rate agreed upon by Aventis and the elevator.

c. Aventis’ obligations set out in Exhibits A, B, and C and in subsection (b) are obligations pursuant to this Agreement and are enforceable by the States. Aventis’ obligations pursuant to Exhibits A, B, and C and subsection (b) include an express obligation to compensate the following entities for loss in value (net any logistics fees received) on StarLink, buffer, and commingled corn:

- (1) StarLink Growers and Buffer Growers;
- (2) Growers of non-StarLink corn containing Cry9C Protein or Cry9C DNA; and
- (3) Grain Elevators.

**5. AVENTIS TO MAIL COPIES OF EXHIBITS TO GROWERS AND ELEVATORS AND MAKE COPIES OF AGREEMENT AVAILABLE.** Aventis shall mail a copy of the relevant exhibit to every grower and elevator that Aventis has identified as having StarLink, buffer or commingled corn. In addition, Aventis shall mail a copy of the relevant exhibit to any new grower or elevator that Aventis identifies as having StarLink, buffer or commingled corn within three business days of Aventis’ receipt of said identification. With respect to elevators, Aventis shall send Exhibit C as amended in accordance with section 4(b). Aventis shall post a copy of this Agreement on its website ([www.starlinkcorn.com](http://www.starlinkcorn.com)) and shall make copies of the Agreement available to grower and elevators upon request.

6. **NO RELEASE OF CLAIMS BY STATES.** The States are not releasing any public or private claims or causes of action as a result of entering into this Agreement. In addition, this Agreement shall not be construed to in any way to affect any claims or causes of action that are now, or may in the future be, held by growers or elevators.

7. **ASSURANCE OF PAYMENT BY AVENTIS.** Aventis has assured the States that it has access to assets necessary to satisfy its obligations pursuant to Exhibits A, B, and C and pursuant to this Agreement. The Parties have agreed that negotiations will continue concerning the details of how this assurance will be implemented.

8. **ADDITIONAL ISSUES AND IMPLEMENTATION.** Aventis and the States expressly agree to continue discussing additional issues concerning StarLink corn as they arise.

9. **TERM OF AGREEMENT.** This Agreement shall be in effect for four (4) years from the date it is executed by the Parties.

Agreed:

\_\_\_\_\_  
John Wichtrich  
Vice President, Commercial Operations  
Aventis CropScience USA LP

Date:

Agreed:

\_\_\_\_\_  
Thomas J. Miller  
Attorney General of Iowa  
on behalf of the State of Iowa and the following states:

Date:

BILL PRYOR  
Attorney General of Alabama

JIM RYAN  
Attorney General of Illinois

STEPHEN CARTER  
Attorney General of Indiana

CARLA STOVALL  
Attorney General of Kansas

ALBERT B. CHANDLER III  
Attorney General of Kentucky

G. STEVEN ROWE  
Attorney General of Maine

J. JOSEPH CURRAN, JR.  
Attorney General of Maryland

MIKE HATCH  
Attorney General of Minnesota

MIKE MOORE  
Attorney General of Mississippi

PATRICIA A. MADRID  
Attorney General of New Mexico

BETTY MONTGOMERY  
Attorney General of Ohio

MARK BARNETT  
Attorney General of South Dakota

DONALD B. STENBERG  
Attorney General of Nebraska

WAYNE STENEHJEM  
Attorney General of North Dakota

W. A. DREW EDMONDSON  
Attorney General of Oklahoma

JAMES E. DOYLE  
Attorney General of Wisconsin